

AMENDMENT

It is respectfully requested that the claims be amended without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows.

1. (Currently Amended) A method for creating a tissue seal, comprising:
contacting a tissue in need of repair, and optionally a second tissue, with at least one photosensitizer agent to form a tissue-photosensitizer mixture; and
applying electromagnetic energy at a wavelength of at least about 488 nm to the tissue-photosensitizer mixture in a manner effective to produce cross linking of a protein in the tissue without producing substantial thermal damage,
wherein the tissue is not contacted with an exogenous cross-linkable substrate which is cross linked by the application of electromagnetic energy,
thereby creating a tissue seal, wherein the tissue seal has the tensile strength of the tissue.
2. (Original) The method of claim 1, wherein the tissue is corneal tissue.
3. (Previously Presented) The method of claim 1, wherein at least one photosensitizer agent is selected from the group consisting of Rose Bengal, and riboflavin-5-phosphate.
4. (Previously Presented) The method of claim 1, wherein at least one photosensitizer agent is Rose Bengal.
5. (Original) The method of claim 1, wherein the contacting step occurs *ex vivo*.
6. (Original) The method of claim 1, wherein the contacting step occurs *in vivo* in a subject.

7. (Original) The method of claim 6, wherein the subject is a human.
8. (Cancelled)
9. (Original) The method of claim 1, wherein the application of electromagnetic energy to the tissue-photosensitizer mixture occurs without more than a 3°C rise in temperature.
10. (Original) The method of claim 1, wherein the application of electromagnetic energy to the tissue-photosensitizer mixture occurs without more than a 2°C rise in temperature.
11. (Original) The method of claim 1, wherein the application of electromagnetic energy to the tissue-photosensitizer mixture occurs without more than a 1°C rise in temperature.
12. (Currently Amended) A method for repairing a corneal lesion, comprising:
contacting a lesion in corneal tissue with at least one photosensitizer agent to form a corneal tissue-photosensitizer mixture; and
applying electromagnetic energy having a wavelength of at least about 488 nm to the corneal tissue-photosensitizer mixture in a manner effective to elicit the production of a reactive species from the photosensitizer without producing substantial thermal damage,
wherein the corneal tissue is not contacted with an exogenous cross-linkable substrate which is cross-linked by the application of electromagnetic energy,
thereby promoting a partial or complete repair of the corneal lesion, such that the intraocular pressure limit of the repaired corneal lesion is greater than 100 mm Hg.
13. (Original) The method of claim 12, wherein the corneal lesion is caused by a surgical procedure.

14. (Previously Presented) The method of claim 13, wherein the surgical procedure is selected from the group consisting of corneal transplant surgery, cataract surgery, laser surgery, keratoplasty, refractive surgery, cornea reshaping, and treatment of corneal laceration.

15. (Previously Presented) The method of claim 12, wherein the electromagnetic energy applied is about 124 to about 762 J/cm².

16. (Original) The method of claim 12, wherein the electromagnetic energy is applied at an irradiance less than 3.5 W/cm².

17. (Currently Amended) A method for repairing a corneal lesion *in vivo* in a living subject, comprising:

contacting a lesion in corneal tissue with Rose Bengal (RB) to form a corneal tissue-RB mixture; and

applying electromagnetic energy to the corneal tissue-RB mixture in a manner effective to elicit the production of a oxygen species from the RB without producing substantial thermal damage,

wherein the corneal tissue is not contacted with an exogenous cross-linkable substrate which is cross-linked by the application of electromagnetic energy,

thereby promoting a partial or complete repair of the corneal lesion, such that the intraocular pressure limit of the repaired corneal lesion is greater than 100 mm Hg.

18. (Original) The method of claim 17, wherein the subject is a human.

19. (Original) The method of claim 17, wherein the corneal lesion is caused by a surgical procedure.

20. (Previously Presented) The method of claim 19, wherein the surgical procedure is selected from the group consisting of corneal transplant surgery, cataract

surgery, laser surgery, keratoplasty, refractive surgery, cornea reshaping, and treatment of corneal laceration.

21. (Withdrawn) A kit for repairing a corneal lesion comprising:
a photosensitizer agent; and
instructions for photoactivation of the photosensitizer agent to repair a corneal lesion.
22. (Withdrawn) The kit of claim 21, wherein the photosensitizer agent is Rose Bengal.
23. (Previously Presented) The method of claim 1, wherein at least one photosensitizer agent is a thiazine dye.
24. (Previously Presented) The method of claim 1 wherein the electromagnetic energy is applied for at least five minutes.
25. (Previously Presented) The method of claim 12 wherein the electromagnetic energy is applied for at least five minutes.
26. (Currently Amended) The method of claim 12, ~~wherein the second tissue is tissue derived further comprising administration of from amniotic membrane therapy.~~
27. (New) The method of claim 17, further comprising administration of amniotic membrane therapy.
28. (New) A method for creating a tissue seal, comprising:
contacting a tissue in need of repair, and optionally a second tissue, with at least one photosensitizer agent to form a tissue-photosensitizer mixture; and
applying electromagnetic energy at a wavelength of at least about 488 nm to the tissue-photosensitizer mixture in a manner effective to produce cross linking of a protein in the tissue without producing substantial thermal damage,

wherein the tissue is not contacted with an exogenous cross-linkable substrate which is cross linked by the application of electromagnetic energy,

thereby creating a tissue seal, wherein the pressure limit of the tissue seal is greater than 100 mm Hg.